

CLAIMS

1. A method for transmitting digital messages, on execution of an instruction sequence by the microprocessor, through output terminals (22) of a monitoring circuit (18) integrated to the microprocessor (12), at least one of said digital messages being representative of characteristic data stored by the monitoring circuit on detection of a jump in the execution of the instruction sequence from an initial instruction to a destination instruction different from the instruction following the initial instruction in the instruction sequence, characterized in that it comprises, for the transmission of a digital message, the steps of:

determining whether the jump is associated with a jump instruction of the instruction sequence for which data representative of the destination instruction address of the jump is explicitly indicated in the instruction;

if yes, assigning a first value to a first set of bits (Tcode) of the digital message, and if not, assigning a second value to the first set of bits;

if the first set of bits is at the second value, assigning to a second set of bits (BType) of the digital message a third value identifying the jump from among several types of jumps; and

transmitting the digital message.

2. The method of claim 1, further comprising the step of assigning to a third set of bits (ICNT) of the digital message a value corresponding to the number of instructions executed by the microprocessor (12) since the last executed instruction of the instruction sequence corresponding to a digital message associated with a jump.

3. The method of claim 1, further comprising the step of, if the first set of bits is at the second value, assigning to a fourth set of bits (ADDR) of the digital message a value representative of the address of the destination instruction.

4. The method of claim 1, in which a jump type corresponds to a jump resulting from a jump instruction of the instruction sequence containing the reference of a register in which are stored data representative of the destination instruction address.

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5. The method of claim 1, in which a jump type corresponds to a jump forced by the microprocessor (12), the destination instruction corresponding to an instruction of a series of specific instructions which does not belong to the instruction series.

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6. The method of claim 1, in which a jump type corresponds to a jump forced by the microprocessor (12), the destination instruction being an instruction of the instruction sequence.

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7. A device for transmitting digital messages between a monitoring circuit (18) integrated to a microprocessor (12) and an analysis tool (24) via output terminals (22) comprising:

means of detection of a jump on execution of an instruction sequence by the microprocessor;

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means for storing data characteristic of the detected jump;

means for determining a digital message based on the stored characteristic data, the digital message comprising a first set of bits (Tcode) set to a first value if the jump is associated with a jump instruction of the instruction sequence for which data representative of the destination instruction address of the jump are explicitly indicated in the instruction, and set to a second value in the opposite case; and

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means for transmitting the determined digital message

characterized in that, when the first set of bits is set to the second value, the determination means is capable of comprising a second set of bits (Btype) in the digital message set to a third value identifying the jump from among several jump types.

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